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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,813	01/12/2005	Markus Oles	39509-205611	6790

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EXAMINER

MATZEK, MATTHEW D

ART UNIT	PAPER NUMBER
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1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/506,813

Applicant(s)

OLES ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-32 is/are pending in the application.
- 4a) Of the above claim(s) 6-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 24-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Response to Amendment

1. The amendment dated 3/5/2007 has been fully considered and entered into the Record. Claim 3 has been canceled. Claims 1, 2 and 4-32 are currently pending, but claims 6-23 have been withdrawn from consideration. Amended claim 1 and new claims 28-32 contain no new matter. The previous 112 2nd paragraph rejection has been withdrawn due to amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5, 24-27 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (WO 97/45502) published 12/4/1997. In this Office Action US 6,337,129, which is a continuation of the WIPO document will be relied upon because the WO document is in Japanese.

Watanabe et al. teach a member having an anti-fouling surface upon which stains are less likely to be deposited. The surface contains hydrophilic and hydrophobic particles that are in and exposed state (Abstract). This anticipates Applicant's invention by providing for a surface with hydrophilic properties. The presence of hydrophobic materials is not precluded by the instant claims. Silica particles may be present on the surface (col. 14, lines 4-13). The hydrophilic silica particles have a particle diameter ranging from 1nm to 1 micron (col. 14, lines 37-40). The substrate may be a fabric or a fiber (col. 6, lines 29-33). The nanometric silica is secured to the surface of a substrate 2 via a surface layer of silicone or silica 4 (col. 3, lines 1-5).

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The photocatalytic oxide may hydrophilize the silica layer 4 upon exposure to light (col. 4, lines 10-15). In this embodiment the silica particles of layer 4 are themselves anchored to the substrate 2. The applied reference anticipates amended claim 1, which recites "the surface consists essentially of particles with hydrophilic properties...", because it has been shown that for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48USPQ2d at 1355. Claim 25 is rejected as the applied reference anticipates the claimed structural limitations. New claim 32 is anticipated as it has been shown that the silica particles of the applied invention are hydrophilic and the Examiner takes the position that the fluororesin particles 5 (Figure 1) constitute the claimed fixative particles as they are polymeric and on the surface of the article.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (WO 97/45502) published 12/4/1997.

a. The silica particles of Watanabe et al. anticipate the claimed particle size of the silica particles (1nm to 20 μ) and as such it is reasonable to presume that the particles of

Watanabe et al. have a surface area that falls in the very broad surface area range claim 28.

b. Watanabe et al. do teach that the weight percentage of the inorganic oxide (silica) in the surface layer may range from 1 to 90 % (col. 14, lines 43-64). The reference also teaches that the proportion of the hydrophobic and hydrophilic portions present on the outermost surface may be altered based upon the desired final product. The applied reference fails to teach the relative amount of the surface area that is composed of hydrophilic particles. The relative amounts of hydrophilic and hydrophobic particles on the surface of the Watanabe et al. article are result-effective variables affecting the surface's affinity for water and liquids. Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the claimed ratio, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Double Patenting

4. Claims 1-5 and 24-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35, 1-31, 1-16, 1-31, 1-21, respectively of copending Application Nos. 10/214,202; 11/346,448; 11/346,427; 10/293,302; 10/309,297. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed inventions are directed to substrates with submicron particles such as silica.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

5. Applicant's arguments filed 3/5/2007 have been fully considered but they are not persuasive.

6. Applicant argues that amended claim 1 precludes the presence of a photocatalyst on the surface along with the hydrophilic silica particles. As pointed out in the rejection above, the use of the transition phrase "consists essentially of" has been shown to be open-ended. Applicant is directed to use the phrase "consists of" to preclude the presence of other particles in claim 1.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is 571.272.2423.

The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571.272.1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mdm



Ms. Arti R. Singh
Primary Examiner
Tech Center 1700